Deep vertical electric sounding of nappe-folded structures and their metallogenic tectonostratigraphy: new trends in geology

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Alai party of Kirghiz geophysical expedition has completed the vertical elektric sounding (250 point) down to 8km depth in 1991 along regional profiles across the Alai and East-Alai nappe-folded structures. As a result, author succeeded in creating the physical-geological model of the Alai structure, in measuring the thickness of nappes and formations at depth, in carrying out the correlation of Phanerozoic geological events and in solving many problems of a prognosis and search for the ore deposits and underthrust oil. Such sounding is the first experience of successful using of this method within nappe-folded building in our country, in conditions of the highland and compound structure.

Allochthonous ore deposits of the Alai, Dinarides and Maghribides form the «reverse» vertical metallo-ore zonality in sequence of these nappe-folded structures and do not enter into the scope of the «classical» metallogeny developed for the «in situ» ore deposits. These deposits require special approach to a determination of their genesis, age and regularity of the temporal and spatial placing. They are not infrequently unique on their scale (Guleman, Idrija), form ore belts (Ore Altai), determine often metallogeny appearance of ore provinces (Mediterranean, Urals) and outline new trend in metallogeny - metallogeny tectonostratigraphy.

Deep vertical electric sounding and metallogeny tectonostratigraphy of the Alai nappe-folded structure have the significance exceeding the bounds of regional one.